

**Data Stripper Controller
Remote Interface
Test Plan**

**for the
ADEOS II NASA/NOAA Ground Network
(NGN)**

**December 10, 2000
Revision 1**

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1.0 Document Overview

This document supercedes the remote interface testing described in the “NGN Data Stripper Controller and Master Controller Test Plan”.

1.1 Scope

The following test plans will exercise the interface between the Data Stripper Controller and the Master Controller (at WFF) and/or Host Controller (at ASF). This document does not cover the Master Controller / WOTIS interface, or the Host Controller / FAIF / IMS interface. This document does not cover the internal process of the master Controller and/or Host Controller.

2.0 Remote Control Functions

This section describes the remote interface test plan for the Data Stripper Controller and the Master Controller and/or Host Controller.

The following are the system remote control functions. These functions are exercised by a remote host (i.e., the Master Controller or Host Controller) interfacing with the station controller through a TCP/IP Ethernet socket connection. All command protocols, directories, and file names to exercise the DSC/MC and DSC/HC interface are defined in the DSC ICD.

2.1 Status Reporting Frequency

The DSC will allow the asynchronous status reporting frequency to be changed.

The following will demonstrate the status reporting frequency function:

1. Using the MC, HC or the Remote Host Simulator test process.
 - a) Examine the Remote Host Simulator’s log and note the time stamp interval for asynchronous status reports from the DSC.
 - b) At the Remote Host Simulator change the asynchronous status reporting frequency of the DSC.
 - c) Again, examine the Remote Host Simulator’s log and note the time stamp interval for asynchronous status reports from the DSC.
 - d) Verify the reporting frequency has change to match the requested frequency.

2.2 Remote Session Control

The following will demonstrate login/logout control:

1. With the operator in control of the system (i.e., local or remote user interface session control), request control through the remote interface.
2. Demonstrate the operator is allowed to accept the request for remote control operation.
3. Demonstrate that if no action is taken the system is automatically downgraded and remote control operation is allowed.
4. Demonstrate that if the operator is not logged into the system, the remote host is given control immediately.

5. Demonstrate that if the operator denies the remote control request, remote control activity is prohibited.
6. Demonstrate the operator can retake control after remote logout.

2.3 Remote Scheduling

The Remotely Scheduled Test is a full system test exercising the DSC, TSI Data Strippers, SAFS, and Master/Host Controller. This test demonstrates all functions that occur during a remotely scheduled and nominal pass. Remote Scheduling is accomplished after the remote host has gained remote session control. The remote host provides a LV0P, RTIG, and schedule to the DSC via the Ethernet connection.

The sensor data for this test will be provided by the Data Stripper's built in data simulators.

The following will demonstrate the DSC can perform a Remotely Scheduled System Test:

1. Set the DPS-II switch to route the simulated data through the switch and into the Data Stripper's FEPs.
2. Obtain session control using either user interface.
3. Use an existing file set map or create a new file set map.
4. Use an existing configuration or create a new configuration.
 - (i) Schedule the system with a configuration file identifier that is an ascii-numeric string with the .cfg file extension.
 - (ii) Schedule the system with a configuration file identifier that is a numeric only string with no file extension. This option allows the remote scheduler to use configuration file identifiers which are the same as for the 11meter system.
 - (iii) Schedule the system with a test parameter set file identifier that is an ascii-numeric string with the .tps file extension.
5. Demonstrate normal remote scheduling.
 - a) From the Master/Host Controller send a LV0P file to the DSC.
 - b) From the Master/Host Controller send a RTIG file to the DSC.
 - c) From the Master/Host Controller send a Normal schedule file to the DSC. A normal schedule file uses the TSI hardware in the following manner:

Primary Rack 60Mb/s, Primary Rack 6Mb/s, Secondary Rack 60Mb/s

- d) From the Master/Host Controller send an Alternate schedule file to the DSC. An alternate schedule file uses the TSI hardware in the following manner:

Primary Rack 60Mb/s, Secondary Rack 6Mb/s

- e) Verify the DSC parses and extracts the information in the LV0P file.
- f) Verify the DSC parses and extracts the information in the RTIG file.
- g) Verify the DSC correlates the information between the LV0P, RTIG, and schedule.
- h) Verify the DSC gets scheduled for the first activity in the remotely received schedule.
6. Demonstrate alternate remote scheduling.
7. Observe the test.
 - a) Verify the DSC is configured.
 - b) Verify the Data Stripper is configured.
 - c) Verify the Data Stripper's processes start when activated.
8. Observe the system performs level zero file and post pass wrap-up activities.
 - a) Verify the level zero processing for each file type and data stream is being updated on the control screen.
 - b) Verify the GLI-1k subsetting for each stream is updated on the control screen.

- c) For GLI-1k reversed packet data verify that its packet order has been changed to forward packet order.
- d) Verify the level zero data files are delivered to the SAFS.
- e) Verify the level zero status report files (ADEOS2 metadata files) are delivered to the SAFS.
- f) Verify the creation and delivery of the status log file to the Master/Host Controller.
- g) Verify the creation and delivery of the Q&A report to the Master/Host Controller.
- h) Verify the creation and delivery of the L0RL file(s) to the Master/Host Controller.
- i) Verify the File Statistics Summary.